Display real-time 1080p video from four HDMI/DVI sources simultaneously on a single display

- Quad, Picture in Picture, Full Screen, and Custom display modes.
  - Custom Display Mode: the size, position and selection of any or all windows are customizable.
    - 2- and 3-source viewing is possible with this method.
    - Maintain input aspect ratio if desired—no stretching necessary.
    - Layer display windows and adjust transparency of each video source display.

- Independent video in to video out resolution.
  - Supports HDTV resolutions up to 1080p and computer resolutions to 1920x1200.
  - Supports 2K resolution 2048x1080, HDTV resolutions to 1080p, and up to 1920x1200 (WUXGA).

- HDMI features supported:
  - Inputs: 24-, 30-, and 36-bit xvYCC, sRGB, and YCbCr.
  - Outputs: 24- and 30-bit sRGB.
  - Four-channel non-mixing or one channel mixing stereo with 16-, 20-, or 24-bit uncompressed PCM audio.
  - Bandwidth up to 165 MHz.
    - Inputs: 2.25 Gbps
    - Output: 2.0625 Gbps
  - HDCP compliant.
  - Fluid, real-time video performance with 60 frames per second (fps) in all four quadrants.
  - Zoom, pan, and crop the image from any source to focus on key areas.
  - Switch audio independently of video from connected HDMI sources (e.g. source 1 and source 2 video are active while only source 3 audio is active).
  - Multiple audio sources can be simultaneously active in any display mode or preset layout.
  - Adjustable audio gain with VU level indicators for each input channel.

- A customized text label can be added for each video window to provide easy input identification (UMD).

- Any DVI source or display can be connected by using the DVI-HD-xx-MM cable (not included).
  - Use DVIA-HD-CNVTR-LC or DVI-HD-CNVTR DVI + Audio to HDMI Converters to pass and independently switch audio signals to the multiviewer.

- Control the multiviewer through Ethernet, RS232 serial port, keyboard/mouse commands, on screen display (OSD), front panel buttons, or optional IR remote.

- Cascade multiviewers to display video from any number of video sources on one screen.
  - Each video source in the cascade can be controlled directly from the Web Server graphical user interface under Custom Mode Settings.

- Backup and restore multiviewer configurations.

- Supported output resolutions can be selected or set to auto detect optimal resolution from the monitor’s EDID.

- Available options: desktop unit, 1RU rackmount unit, dual side-by-side rackmount units in 1RU
  - Rackmount units can be mounted so that the front panel buttons are facing the front or back of the rack.
  - Rackmount units include cable management shelf.
  - All units can be purchased with a medical grade power supply for healthcare industries.

**Configuration and Cable Illustration**
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Specifications

Video Input
- Four female HDMI connectors.
- Supported video input resolutions:
  - 2K Cinema (2048x1080 @ 60Hz)
  - HDTV resolutions to 1080p
  - Up to 1920x1200 (WUXGA)
- Supports digital HDMI devices, such as DVD/Blu-ray players, satellite receivers and HDTV tuners.
- A DVI source can be connected by using the DVI-HD-xx-MM cable (not included). The cable does not pass audio to the multiviewer.
  - Use a video + audio to HDMI video converter to pass embedded HDMI audio into the multiviewer (see Compatible NTI Products below).
- Supports HDCP 1.2

Video Output
- One female HDMI connector.
- Supported video output resolutions:
  - 2K Cinema (2048x1080 @ 60Hz)
  - HDTV resolutions to 1080p
  - Up to 1920x1200 (WUXGA)
- HDMI-embedded audio switching (four-channel stereo, non-mixing or one-channel stereo, mixing).
- A DVI display can be connected by using the DVI-HD-xx-MM cable (not included). The cable does not pass audio to the display.
  - Use a video + audio to HDMI video converter to pass embedded HDMI audio into the multiviewer (see Compatible NTI Products below).
- Supports HDCP 1.2
- Latency:
  - 50mS at 60Hz
  - 60mS at 50Hz
  - 100mS at 30Hz
  - 120mS at 25Hz
  - 125mS at 24Hz

Devices
- Two female USB Type A connectors for keyboard and mouse.
- Keyboard and mouse are hot-pluggable.

Protocols
- HTTP, HTTPS
- TCP/IP, DHCP, UDP, ARP
- IPV4
- Supports HTTP REST API to configure SPLITMUX-HD-4RT with response in JSON format.
  - How to Configure SPLITMUX-HD-4RT Using HTTP-Based Text Commands (HTTP REST API)

Power
- 110 to 220 V AC at 50 or 60Hz via country-specific AC adapter.
- Power consumption: 10W
- Optional medical grade power supply
  - Accepts 100 to 240VAC

Dimensions
- SPLITMUX-HD-4RT (desktop)
  - WxDxH (in): 7.35x4.98x1.09 (187x126x28 mm)
- SPLITMUX-HD-4RT-R (1RU rackmount) and SPLITMUX-HD-4RT-2R (1RU dual side-by-side rackmount)
  - WxDxH (in):
    - Without rackmount kit: 7.35x4.98x1.75 (187x126x45 mm)
    - With rackmount kit: 19x4.98x1.75 (483x126x45 mm) (excludes cable tray)
    - Can be mounted so that the front panel buttons are facing the front or back of the rack.
    - Includes cable management tray.
    - Adds 3.37” to the depth.

Environmental
- Operating temperature: 32 to 122°F (0 to 50°C).
- Storage temperature: -22 to 140°F (-30 to 60°C).
- Operating and storage relative humidity: 17 to 90% non-condensing RH.

Regulatory Approval
- CE, RoHS.

Compatible NTI Products
- Combine NTI’s video converters, splitters, and extenders for complex applications
  - DVI-D to HDMI Single Link Interface Cable (DVI-HD-xx-MM).
  - The cable does not pass audio to the multiviewer.
  - DVI Matrix Switch (SM-nXm-DVI-LCD)
  - DVI + Stereo Audio to HDMI Converter (DVIA-HD-CNVTR-LC)
  - DVI + Digital Audio to HDMI Converter (DVI-HD-CNVTR)
  - Composite Video + Audio to HDMI Converter (CVA-HD-LC)
  - VGA + Audio to HDMI Converter Cable (VGAA-HD-ULC)
  - VGA/Component Video/HDMI Scaler/Converter (PCHD-HDMI-SCALER)
  - HDMI HDBase-T Splitter/Extender (VOPEX-C6HD-8HDBT-230)
  - Low-Cost HDMI Extender via One CAT5e/6 (ST-C6HD-150-LC)
  - Low-Cost HDMI Over Gigabit IP Extender (ST-IPHD-LC)
  - HDMI HDBase-T Extender via One CAT5e/6 (ST-C6HD-HDBT)

Display Modes

Quad Mode
- In quad mode, the screen is split into four fields of equal size each displaying the entire contents of four different video sources.
  - Fluid, real-time video performance with 60 frames per second (fps) in all four quadrants.
  - Borders can be set for each image input.

Full Screen Mode
- In full screen mode, one of the four video sources is displayed in full screen size and maximum resolution.
- Scan feature: cycle through four different sources at set intervals.
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**Display Modes (continued)**

### Custom Mode
- In Custom mode, each video source is displayed in its own separate, detached window.
- Size, position and selection of the windows are customizable.
- Use web server graphical user interface to configure settings for each window.
- Zoom, pan, and crop the image from any source to focus on key areas.
- 2- and 3-source viewing is possible with this method.
- Presets of the window positioning can be saved.
- Borders can be set for each image input.
- Display optional Left/Right VU level indicators for each corresponding display window.
- Chroma Key Setting provides the ability to superimpose elements from one video feed onto another video feed.
- Configure up to 10 preset layouts that can be switched live at any time.

### Control Methods

**Front Panel Interface**
- Use front panel buttons to locally change ports or to select a display mode.

**Ethernet Control**
- Configuration can be done over the Internet/LAN via Web page or Telnet.
- Supports Internet Explorer 6.0 or higher, Firefox 2.0 or higher, Opera 9.0, Google Chrome, Safari 4.0 or higher for MAC and PC.
- Configure and control the settings for the system, network, input, output, and modes.
- Female RJ45 connector.
- 10/100 BaseT Ethernet interface.
  - Use NTI's Discovery Tool on a PC or MAC with Java Runtime Environment (version 6 or higher) installed to detect the IP address of a SPLITMUX unit.

- Web Server
  - Security is ensured by password and user configurable timeout.
  - Up to 16 users can access the web page at one time.
  - The user with administrative privileges can access the following pages:
    - System page: allows configuration of unit, serial port, and OSD settings.
    - Network pages: configure IP and server settings.
    - Inputs page: allows configuration of the four video inputs.
    - Output page: configure the video and audio output parameters.
    - Modes page: allows selection and configuration of the output display mode.
    - Custom page: graphical user interface allows simple configuration of all display windows.
      - Control each video source in a cascade by double clicking on the corresponding video source window.
      - User Config page: add, configure, and view all users.
      - Firmware page: update firmware for the SPLITMUX.

- Telnet
  - Security is ensured by password.
  - Menu commands are similar to RS232 commands.
  - The telnet server listens on port 2000.
  - Port 2000 is for an operator telnet session.
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Control Methods (continued)

**On Screen Display (OSD)**
- Select display modes and computers with On Screen Display (OSD).
- Use the front panel buttons or keyboard commands to operate the OSD.
- Use the front panel buttons to operate the OSD.
- OSD controls for configuration and control of the system, network, input, output, and display modes.
- Access to OSD Mode can be limited by an administrator-assigned PIN number.

**RS232**
- Configuration and control can be done through the serial port.
  - Female RJ45 connector.
- Control the multiviewer using the Text Menu via RS232.
- Selectable baud rate: 1200 to 115,200 bps.
  - Baud rate is set via the front panel interface, serial command, OSD, or web interface.

**Infrared Remote Control (Optional)**
- Optional control method.
  - IRT-UNV is sold separately.
- Sold Separately
- Routes video and audio signals together or independently.
- A single IR remote can control up to 15 units (individual or cascaded).
  - Use the “sys” button on the remote followed by the user-configured address of the unit to switch between the units controlled.
- Transmitter can be up to 30 feet (9.1 meters) away.
- Power: two AAA batteries (included).

**Keyboard/Mouse**
- Use keyboard or mouse commands to select display mode and to select port.

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**HDMI Quad Screen Splitter/Multiviewer**

<table>
<thead>
<tr>
<th>NTI Part #</th>
<th>Supported Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPLITMUX-HD-4RT</td>
<td>HDMI Quad Screen Multiviewer, Desktop</td>
</tr>
<tr>
<td>SPLITMUX-HD-4RT-R</td>
<td>HDMI Quad Screen Multiviewer, 1RU Dual Side-by-Side</td>
</tr>
<tr>
<td>SPLITMUX-HD-4RT-2R</td>
<td>HDMI Quad Screen Multiviewer, 1RU Dual Side-by-Side Rackmount</td>
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